



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
CHATTANOOGA ENVIRONMENTAL FIELD OFFICE

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File: Athens
S/W-MS4
2015
(McMinn)

November 5, 2015

Honorable Ann Davis
City of Athens
PO Box 849
Athens, TN 37371-0849

Re: City of Athens Municipal Separate Storm Sewer System (MS4) – Phase II
NPDES Permit Number TNS075141
McMinn County, TN

Dear Mayor Davis:

On September 30, 2015, Ms. Angela Young, Mr. Charles Walton, and Mr. Michael Bascom of the Division of Water Resources (DWR) completed a desk audit of the City of Athens MS4 program (Athens). The audit focused specifically on the analytical monitoring requirements set forth in the NPDES MS4 Phase II permit and associated records and reports submitted to the Division. The purpose of the desk audit was to determine Athens's compliance with the terms and conditions of its National Pollution Discharge Elimination System (NPDES) permit, NPDES Permit Tracking Number TNS075141.

Permit

The City of Athens has coverage under General NPDES MS4 Phase II permit which became effective on February 11, 2011 and expired on September 1, 2015. Although the general permit has expired this permit will continue to be in force and in effect until a new permit is issued.

A review was conducted of all monitoring data that the City of Athens MS4 submitted to the Chattanooga Environmental Field Office during the permit cycle. A summary of the data is below.

Analytical Monitoring [TNS000000, 5.1]

Requirement: Perform analytical monitoring in streams with EPA approved TMDLs and impaired streams. The Hiwassee River watershed, HUC 06020002 has an EPA approved TMDL. The streams in Table 1 were evaluated because they are tributaries to Hiwassee River watershed and because they are listed as being impaired for siltation, habitat alteration and pathogens.

Frequency: At least one sample per stream segment must be collected, with all segments in the MS4 jurisdiction sampled in a five-year period.

Table 1. EPA approved TMDL: Hiwassee watershed HUC 06020002				
Waterbody	Sampling station	Date	SCORE	Habitat Assessment
North Mouse Creek	NMOUS025.4MM	8/21/13	126	Supporting (>123)
	NMOUS027.8MM	8/22/13	87	Impaired (<123)
	NMOUS030.7MM	8/21/13	111	Impaired (<123)
Oostanaula Creek	OOSTA030.0MM	8/22/13	120	Supporting (>119)
	OOSTA034.8MM	8/22/13	120	Impaired (<140)
	OOSTA037.1MM	8/22/13	121	Impaired (<140)
Walker Branch	WALKE000.6MM	8/22/13	82	Impaired (<119)
Source: Macroinvertebrate, Habitat and Physio-Chemical Report—McMinn County, Tennessee, dated October 21, 2013 prepared by Third Rock Consultants, LLC. North Mouth watershed is in Ecoregion 67G. OOSTA034.8MM and WALKE000.6MM are in 67I, and OOSTA034.8MM and OOSTA037.1MM are in 67F.				

According to Macroinvertebrate, Habitat and Physio-Chemical Report—McMinn County, Tennessee, dated October 21, 2013 biological stream surveys were conducted according to the Semi-Quantitative Single Habitat (SQSH) Method as identified in the division's *Quality System Standard Operating Procedure for Macroinvertebrate Stream Survey*, revised July 1, 2011.

Analytical Monitoring for Macroinvertebrate sampling [TNS000000, 5.1]

Table 2. Field Parameters and Flow measurements					
Sampling station	DATE	Temp (°C)	DO (mg·l⁻¹)	pH	Conductivity
NMOUS025.4MM	8/21/13	19.6	8.8	7.8	285
NMOUS027.8MM	8/22/13	19.0	8.5	7.6	270
NMOUS030.7MM	8/21/13	18.2	8.3	7.6	250
OOSTA030.0MM	8/22/13	19.7	8.3	7.5	243

OOSTA034.8MM	8/22/13	19.8	9.2	7.6	240
OOSTA037.1MM	8/22/13	18.7	8.6	7.6	232
WALKE000.6MM	8/22/13	19.7	8.3	7.3	188
Source: Macroinvertebrate, Habitat and Physio-Chemical Report—McMinn County, Tennessee, dated October 21, 2013 prepared by Third Rock Consultants, LLC.					
Approved EPA TMDL: Hiwassee watershed HUC 06020002					

Field parameters were recorded at each biological monitoring station before the site was sampled as required by the division's *Quality System Standard Operating Procedure for Macroinvertebrate Stream Survey*, revised July 1, 2011.

Table 3. TMI values						
	North Mouth Creek					
	NMOUS025.4MM		NMOUS027.8MM		NMOUS030.7MM	
METRIC	VALUE	SCORE	VALUE	SCORE	VALUE	SCORE
TOTAL NO.	193	N/A	223	N/A	201	N/A
TR	16.	2	29.	6	30	6
EPT RICHNESS	6	2	7	4	9	4
% EPT	15.9	2	16.4	2	54.3	6
% OC	21	6	28.3	4	12.7	6
NCBI	5.56	4	5.5	4	4.6	6
%TNUTOL	69.7	2	45.7	4	15.7	6
% CLINGERS	81	6	81.7	6	66.5	6
TMI SCORE	24		30		40	
Source: Macroinvertebrate, Habitat and Physio-Chemical Report—McMinn County, Tennessee, dated October 21, 2013 prepared by Third Rock Consultants, LLC.						

Table 4. TMI Values								
	Oostanaula Creek						Walker Branch	
	OOSTA030.0MM		OOSTA034.8MM		OOSTA037.1MM		WALKE000.6MM	
METRIC	VALUE	SCORE	VALUE	SCORE	VALUE	SCORE	VALUE	SCORE
TOTAL NO.	199	N/A	217	N/A	221	N/A	219	N/A
TR	28	4	19	4	25	4	30	4
EPT RICHNESS	5	2	6	2	4	2	9	4
% EPT	11.2	0	15	2	3.7	0	12.4	0
% OC	40.3	4	28.8	4	65.6	2	26.2	6
NCBI	5.37	4	5.56	4	5.63	4	5.4	4
%TNUTOL	44.9	4	59.7	2	56.7	2	54.6	2
% CLINGERS	57.1	6	86.7	6	60	6	64.2	6
TMI SCORE	24		24		20		26	
Source: Macroinvertebrate, Habitat and Physio-Chemical Report—McMinn County, Tennessee, dated October 21, 2013 prepared by Third Rock Consultants, LLC.								

Analytical Monitoring for Pathogens [TNS000000, 5.1]

Requirement: Bacteriological sampling is required for all stream segments identified as being impaired for pathogens, where discharges from the MS4 have been identified as a source of the impairment. Sampling included five stream samples within a thirty-day period (to establish a geometric mean), and be performed according to the division's Quality System Standard Operating Procedure.

Frequency: Bacteriological sampling must be performed such that all pathogen-impaired segments in the MS4 jurisdiction are sampled within a five-year period.

Table 5. Summary of Bacteriological Sampling in streams.							
Oostanaula Creek							
Site	<i>E. coli</i> (cfu /100ml)						Geomean (cfu /100ml)
	9/16/13	9/18/13	9/19/13	9/24/13	9/25/13 (Rain)	9/20/13	(Without Rain Event)
001 (OOSTA005.8MM)	166	171	125	93	378	74	120
002 (OOSTA026.6MM)	80	166	125	131	579	210	135
003 (OOSTA028.4MM)	137	261	131	199	921	178	175
004 (OOSTA030.0MM)	108	107	122	185	1300	144	130
005 (OOSTA030.1MM)	210	102	111	291	2420	145	159
006 (OOSTA033.6MM)	116	99	78	225	2420	62	105
007 (OOSTA035.1MM)	115	133	55	137	360	80	98
Source: Table 2, Monitoring Report—McMinn County, Tennessee, dated October 29, 2013 prepared by Third Rock Consultants, LLC. Yellow highlighting indicates an exceedance of the regulatory limit.							

According to the report, bacteriological stream sampling was performed utilizing methods identified in the division's *Quality System Standard Operating Procedure for Chemical and Bacteriological Sampling of Surface Water*, revised December 2009.

Non-analytical Monitoring [TNS000000, 5.2]

Visual Stream Surveys and Impairment Inventories are included in the 2011 TMDL Siltation/Habitat alteration and Benthic Monitoring report, dated March 7, 2012 submitted to TDEC DWR.

According to our review, all of the monitoring required by your NPDES permit has been conducted and all the required deliverables have been submitted to TDEC DWR.

Required Actions:

By December 31, 2015 Please submit an updated GIS shape file to the Division that delineates the MS4's boundary based on the most recent Census data.

Recommended Actions:

Oostanaula Creek was deposited in August 2015. Although E. coli levels have significantly reduced DWR recommends that the City of Athens MS4 coordinate with Athens Utilities Board to identify possible Illicit Discharges cause by sewerage.

Additional Comments:

When the new Phase II MS4 is issued The Division will schedule a meeting with each MS4 to discuss the requirements of the new permit cycle.

This letter provides a record of the September 30, 2015 TDEC DWR Desk Audit of City of Athens MS4's Analytical and Non-Analytical Monitoring.

We thank the City of Athens for your efforts to improve water quality and your compliance with the Phase II MS4 NPDES permit. Furthermore, we applaud your proactive approach for protecting the streams and waterways of Tennessee. If you have any questions concerning either our desk audit or this report, please contact Michael Bascom at (423) 634-5710.

Sincerely,



Ms. Jennifer Innes
Environmental Program Manager
Division of Water Resources
Chattanooga Field Office

cc: Shawn Lindsey, Director of Public Works, City of Athens via email